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Protocol for a scoping review of measures and definitions of gender-based discrimination linked to health outcomes in low and middle-income countries

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ABSTRACT

Introduction Gender-based discrimination (GBD) is generally defined as unequal or disadvantageous treatment based on one's gender. Emerging evidence suggests that exposure to GBD in its various forms can yield negative consequences for women's health, including delaying access to healthcare services and lowering the quality of nutrition. Although consensus exists around the theoretical definitions of GBD, current studies are limited on how to measure GBD empirically in order to assess its true impact on women's health. Our mixed-methods scoping review aims at synthesising existing evidence by answering the question *How is gender-based discrimination defined and measured in the health literature, with specific reference to Low and Middle-Income Countries (LMICs)*?. Our ambition is to identify commonalities across definitions and measures to generate a dialogue towards reaching consensus around the development of a single standardised tool to be applied in health studies.

Methods and analysis Our mixed-method scoping review includes quantitative, qualitative and mixed-methods studies and unfolds according to the six stages proposed by Levac *et al*. Eligibility criteria for studies were defined in order to reflect the three core elements of the search, namely (1) the discrimination based on the gender, (2) the link to health outcomes and (3) the developing countries context. Four databases (PubMed, Web of Science, Cinahl and Econlit) were searched. We will extract and synthesise information from quantitative and qualitative studies following the framework proposed by Hong and use the Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review tool as a guide.

Ethics and dissemination Since our scoping review relies exclusively on information extracted from published articles, its conduct is not subjected to ethical clearance. Results will be described and discussed in a peer-reviewed article and presented at relevant workshops and conferences.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This is the first review to synthesise gender-based discrimination (GBD) in low and middle-income countries (LMICs) linked to health outcomes.
⇒ We synthesise quantitative, qualitative and mixed and multimethod studies, providing a comprehensive overview of the themes and dimensions of GBD.
⇒ A rigorous methodology described by Levac and the Joanna Briggs Institute will be followed and we will report the review using the Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review checklist.
⇒ While we focus on cisgender women in this review, we exclude other differently-identifying women in order to limit the scope of the review.
⇒ Our search was limited to research published in English and literature on LMIC settings, and findings published in other languages and similar work conducted in other countries were, therefore not synthesised.

INTRODUCTION

Background and general definition

Gender-based discrimination (GBD), gender inequalities and restrictive gender norms lead to poor performance in the delivery of good health and have pervasive effects that hold back societies, and especially women and girls within them, from achieving their full development.[1] The concept sits at the core of goal 5 (Gender Equality) and goal 10 (Reduced Inequalities) of the Sustainable Development Goals (SDGs).[2]

GBD is increasingly being recognised as an important factor affecting healthcare access and well-being. It is also recognised that GBD affects women's health more broadly, by shaping resource allocation, both within and outside the household, and limiting access to health services.[3 4] In addition, besides the well-known correlation between age, poverty, education and access to medical facilities, emerging evidence suggests that the experience of GBD may contribute to the high levels

of maternal mortality still observed in many regions of the world.[5 6] Thus, reducing GBD against women is postulated as an essential step towards achieving Target 3.1 of the SDGs, which demands a strong decrease in maternal mortality by 2030.[7]

Despite the evidence around the interest to define and measure GBD and consensus around theoretical definitions of GBD (eg, 'any situation where a person is denied an opportunity or misjudged solely on the basis of their sex, … any unequal treatment based on gender and may also be referred to as sexism'[8]), there is no consensus around all the forms these discriminatory treatments can take and how they can be measured. Existing measures of GBD include various dimensions: the Gender Inequality Index introduced by the United Nations Development Programme, assesses gender-related inequalities based on elements such as adolescent birth rates, the proportion of adult females with at least some secondary education and the labour market participation of women,[9] the Afrobarometer uses an experience-based approach.[10] A global understanding of what GBD encompasses in the literature and a comprehensive measure of GBD are, thus, a prerequisite for a systematic assessment of GBD in different countries and contexts, and for better understanding the relationship between GBD and health outcomes.

However, no systematic overview is available that summarises the different definitions and measures of GBD that have been used in existing studies and focusing on low and middle-income countries (LMICs). This focus on LMIC is justified by poorer health outcomes in LMIC, and by several health issues that are much more observed in LMICs.

Though many phenomena that can be associated with an aspect of GBD are individually studied in the literature, there is no consensual, valid and reliable scale that allows a study of the extent to which GDB is experienced in a certain context. Our mixed-methods scoping review aims to provide an overview of quantitative measures and qualitative conceptions of GBD used in studies linked to health outcomes.

METHODS AND ANALYSIS

Since we are interested in examining what is known about GBD and health outcomes, and we expect to uncover varied evidence on this topic we have envisioned a mixed method scoping review. Like systematic reviews, scoping reviews use a systematic approach to searching, screening, extracting and reporting. Our scoping review will use the Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for Scoping Reviews (PRISMA-ScR) tool[11] (see online supplemental annex 1).

We will conduct this scoping review using the methodology proposed by Levac *et al*[12], and the Joanna Briggs Institute,[13] which builds on the initial framework proposed by Arksey and O'Malley.[14] As recommended by the published guidance, this scoping review will follow a six-stage process described in table 1:

Table 1 Stages of the conduct of the review

Stage	Description
1	Identifying the research question.
2	Identifying relevant studies.
3	Study selection according to the inclusion and exclusion criteria.
4	Charting the data.
5	Collating, summarising and reporting results.
6	Consulting with stakeholders.

Stage 1 identifying the research questions

In line with our study objective, we conducted preliminary searches to help identify relevant literature. We explored different forms of GBD described in the literature, such as decision-making power inside the household (regarding expenditures, health-seeking behaviour), access to education (that improves health literacy) and violence against women. We concluded that specifying any explicit and specific form of GBD in the search strategy had the potential bias of the search results: some forms of GBD were over-represented in the retrieved results, while some were almost excluded. Therefore, we decided to focus only on studies that explicitly refer to discrimination, and not to specify in the research term any term that would refer to a specific form of GBD. From this first stage, we could draw the following research questions:

1. How is GBD conceptualised, described and defined in the health literature? Which specific aspects and components of GBD are considered?
2. In quantitative studies, how is GBD measured (eg, dimensions considered, data sources and data collection modalities, analytical approach)?
3. In qualitative studies, how is GBD defined? Which dimensions and concepts of it are explored, why and how?
4. What measures and what dimensions are considered in specific settings and/or in relation to specific health outcomes?

Stage 2 identifying relevant studies

From the research questions, we developed a search strategy and inclusion and exclusion criteria. We agreed that only peer-reviewed articles published in English between 1985 and 2021 would be considered.

We structured the final search strategy around three elements, with each required to appear in titles or abstracts of selected studies[1]: gender discrimination-related terms,[2] health terms and[3] LMICs context-related terms. This strategy is represented in table 2. We initially defined the precise search terms included in each element based on the respectively associated MeSH terms 'sexism', 'health' and 'LMICs' in the PubMed library. The framing of the GBD element was crucial. Studies had to exhibit in their title or abstract a synonym of the term 'discrimination', thus a librarian conducted the searches with alternative

Table 2 Search strategy structure (for PubMed database)

Component 1 Gender Discrimination			AND	Component 2 Health	AND	Component 3 LMICs
Sexism (MeSH) OR				"Health" (MeSH) OR		Developing countries (MeSH) OR
Gender* (tiab) OR	AND			"Women's Health" (MeSH) OR		Synonyms of developing countries (tiab) introduced with "OR"
Genital (tiab) OR		Discrimination* (tiab) OR		"Disease"(MeSH) OR		Single LMICs name introduced with "OR"
Sex (tiab) OR		Bias* (tiab) OR		health* (tiab) OR		
Sexism* (tiab) OR		Stigma* (tiab)		medical* (tiab) OR		
Woman* (tiab) OR				diseases (tiab) OR		
Women* (tiab) OR Woman* OR				disorder* (tiab) OR		
Female* (tiab) OR Women* OR				illness* (tiab) OR		
Girl* (tiab) Female* OR				"Mortality"(MeSH) OR		
Girl* (tiab)				"Morbidity"(MeSH) OR		
Girl* (tiab)				mortalit* (tiab) OR		
				death* (tiab) OR		
				fatalit* (tiab) OR		
				morbidit* (tiab)		

discrimination synonyms: we successively introduced various terms such as bias, underservice, harassment, violence and compared the retrieved results. The addition of some of these terms retrieved specific forms of discrimination, while excluding others. Therefore, we retained the terms 'bias' and 'stigma' which retrieved all forms of discrimination, in order to not bias the searches towards certain specific forms of discrimination.

With the help of a librarian and following an iterative process recommended by Levac *et al*[12], we tested and executed several forms of the search on the basis of the retrieved titles and abstracts.

Four databases (Pubmed, Web of Science, Cinahl and Econlit) were searched with those conditions, by a librarian to match the formal requirements of each database. The full search strategies are provided in online supplemental annex 2.

Stage 3 study selection

Title and abstract screen

A preliminary screening of titles and abstracts of 500 hits by four reviewers allowed us to expand and refine the inclusion and exclusion criteria, for the screening process to be as systematic as possible. Box 1 provides the selected inclusion and exclusion criteria. We defined the criteria to select studies that likely contained either a qualitative definition or a quantitative measure of GBD. Studies were eligible if they reported on a GBD that was linked to a health outcome in the context of an LMIC. Given the complexity of studying intersectionality's between gender-based and other forms of discrimination, the review is restricted to the experiences of cisgender women, that is, individuals whose gender identify aligns with the sex they were assigned at birth, heterosexually identified women and excludes those of transgender and gender non-conforming (trans) populations as well as broader groups of lesbian, gay, bisexual, transgender and queer populations. We also excluded articles with a focus only on subcategories of women that might be discriminated because of several reasons (migrants, widows for instance). Regarding the exclusion of studies focused on specific health conditions, special attention was given to exclusively feminine conditions or care: maternal mortality, treatment of and stigma related to obstetric fistula and abortion care, for instance. Indeed, a poor service in those areas can be directly interpreted as gender discrimination, as women are the only ones who

Box 1 Inclusion and exclusion criteria

Inclusion criteria

1. Gender-based discrimination has to be either a variable of interest or exposure.
2. Studies located in low and middle-income countries.
3. Studies with an explicit focus on discrimination.

Exclusion criteria

4. Studies focusing on the gender bias of differences in the prevalence of specific health conditions.
5. Studies focusing transgender and homosexual people.
6. Studies related to the stigma caused by a specific health condition, for example, mental health, HIV, epilepsy, leprosy and obesity.
7. Studies focusing on a subcategory of women (widowed, migrants, sex workers, drug users, etc).
8. Studies located in developed (high-income) countries.
9. Studies where discrimination appears only as a discussion or interpretation.
10. Studies which are research protocol papers or PhD thesis.

use them. But in the pursuit of consistency, we decided that a term related to the GBD has to appear explicitly in the title or the abstract for the paper to be included in the review. The hits were then imported into Covidence software,[15] to remove duplicates before the screening phase. A two-reviewer approval is needed per article in order for it to be selected for full-text screening. Conflicts will be resolved by a fifth reviewer.

The process of study selection will be reported using a PRISMA flowchart.[16]

Full-text screen

The full-text screen will be completed independently by four reviewers using the same inclusion and exclusion criteria outlined above. As with the title and abstract screen, Covidence software will be used to conduct the screening and monitor agreement between the reviewers' assessment. Two approvals are needed for a study to be included in the data extraction phase. All differences in screening will be resolved in consultation with a fifth reviewer if needed.

Stage 4 charting the data

A preliminary version of the data extraction framework is developed and provided in online supplemental annex 3. The extracted information is centred around the GBD measures used in the synthesised studies: a first group of questions gather general bibliographic information about the study and its context; a second one focuses on the status of the GBD outcome (interest or exposure, nature of the link to health outcomes) and on its nature (composite measure or not); a third one, only for quantitative studies, goes into the details of the measure or of the components of the measure if there are several of them: definition, data source, unit of measure, and a fourth one, only for qualitative studies, goes into the details of the discrimination outcome: definition(s), characteristics of the study population. Data will be extracted by three reviewers; in a first random sample of selected studies (whose size will represent 10% of the number of selected studies), data will first be extracted independently by the three reviewers. Results will be compared between the three, in order to refine the data extraction items if needed, and to ensure the systematicity of the data extraction across reviewers. After this preliminary phase, selected studies will be shared between the two reviewers for data extraction. Data from another sample of studies will additionally be extracted independently by the two reviewers to be compared, in order to ensure the inter-reliability of the information. If some differences are noted, consensus will be reached through discussion within the team and the items will be made more explicit. Some additional items are likely to appear during the data extraction; they will be discussed and then potentially included in the framework.

Data will be analysed with Microsoft Excel software with the perspective of developing a global view of how GBD is considered, defined and measured in the health literature. We will follow the approach suggested by Hong *et al*[17][17] to manage quantitative and qualitative studies: we will synthesise separately quantitative and qualitative data and then appraise them jointly. We will not transform data (ie, quantifying qualitative data), but join evidence emerging from the quantitative and qualitative and mixed methods.

Stage 5 collating, summarising and reporting the results

We will gather identical or close measures and definitions of GBD into categories representing similar types of measures, separating quantitative indicators and qualitative definitions in a first step. We will then link qualitative and quantitative measures to each other, by gathering the groups of measures or definitions that refer to similar aspects of GBD. Once completed, we will draw a broad map of how GBD is defined and measured in the health literature. It will be possible to identify which kind of measures are used in which kind of studies, for instance, or in which geographical areas. It will also be possible to explain those differences: they may be caused, for instance, by inequalities in data availability, or by differences in the main forms exhibited by GBD across contexts.

Stage 6 consultation exercise

The results of this review will be disseminated to stakeholders at several occasions. The scoping review and plan has been presented and discussed at the German Alliance for Global Health (GLOHRA) annual event in October 2021 and in an online GLOHRA seminar. Key informants are also solicited at every stage of the review (from the screening stage) in order to discuss our strategy and early results to their expertise and reshape things if needed. The results will feed the design of a qualitative study that will include interviews with stakeholders (policymakers, healthcare workers). This could lead to the refinement and enlargement of the scope of GBD as defined by the literature, if policy, healthcare workers and other key stakeholders in the interviews raise additional aspects of GBD that are not extensively available in the retrieved peer-reviewed literature. This will help to enrich and refine the quantitative measures included in the final tool developed as a result of this exercise.

Current study status

The scoping review started in February 2022 and is expected to be completed in August 2022. The search strategy was developed in collaboration with a librarian at the University of Heidelberg and has been translated for each of the four databases. All four database searches have been completed (Stage 2) and title/abstract screening is ongoing (Stage 3).

Patient and public involvement

There was no involvement from patients and/or the public in the design of this research, and no patients or members of the public will be involved in the conduct of the review. We will present the results of the review to

stakeholders, policymakers and experts in order to get their feedback.

ETHICS AND DISSEMINATION

No ethical approval was sought for this review as it only uses data from already published studies and publicly available scientific literature. The review is registered on Open Science Framework with the link https://osf.io/t97f8/, where the complete protocol is available. The results of the mixed-method scoping review will be synthesised and disseminated in an article that will be submitted to a peer-reviewed journal and presented in relevant scientific events. We aim to use this review as a first step to understand GBD towards cisgender women and propose to later conduct additional reviews to include other groups of women, referring back to the findings of this more tailored review to examine commonalities and differences between the experiences of differently-identifying women. We view this as a sequential exercise; hence it is not a focus of this review.

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Contributors All authors were involved in the design of the search strategy and the data extraction table building. LP, SS, RS-R and CO are the main reviewers in the screening and the data extraction. MDA and WQ will resolve conflicts during the screening phase. LP wrote a first version of the study protocol; all authors took part in its revisions. All authors approved the final submitted manuscript. LP is the guarantor of the review.

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Competing interests None declared.

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